

ABSTRACT OF THE DISCLOSURE

The objective is an optical transmission unit capable of coupling and branching signal lights of individual wavelengths at a data rate of 10 Gbits/s. In order to achieve the objective, DCFs are provided and proper values of dispersion compensation are given, so that different characteristics depending on the respective wavelengths to be coupled, split and pass through without being split are obtained. The signal lights are amplified by a plurality of low-excitation optical amplifiers to regain their light levels which are weakened due to using an optical coupler, branching filter and DCF together, thereby enabling a long-distance transmission.